CONFERENCE OF THE COMMITTEE ON DISARMAMENT

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On definitions of new types of weapons of mass destruction and new systems of such weapons

The draft agreement on the prohibition of new types of weapons of mass destruction and new systems of such weapons, submitted by the Union of Soviet Socialist Republics at the thirtieth session of the United Nations General Assembly (CCD/511), provides that the new types of weapons of mass destruction and the new systems of such weapons to be prohibited are to be specified through negotiations on the subject (article I, paragraph 1 of the draft).

Further to the preliminary considerations on the question of the definition of new types and systems of weapons of mass destruction, as expressed by the Soviet experts at the 1976 spring session, the present working paper proposes the following draft definitions:

I. New types of weapons of mass destruction

New types of weapons of mass destruction shall include types of weapons which are based on qualitatively new principles of action and whose effectiveness may be comparable with or surpass that of traditional types of weapons of mass destruction.

The term "based on qualitatively new principles of action" shall be understood to mean that the means of producing the effect or the target or nature of the effect of the weapon is new.

The term "means of producing the effect" shall be understood to mean the specific type of physical, chemical or biological action.

The term "target" shall be understood to mean the type of target, ranging from vitally important elements of the human organism to elements of man's ecological and geophysical environment, and also to networks and installations which are vitally important for human existence.

The term "nature of the effect" shall be understood to mean the new type of destruction which leads either to immediate mass annihilation or to the gradual extinction of large groups of the population.

II. New systems of weapons of mass destruction

New systems of weapons of mass destruction (apart from systems which may be developed in future when research on and development of new types of weapons of mass destruction has been completed) shall include systems of weapons which assume the character of weapons of mass destruction as a result of the use of new technical elements in their strike or logistic devices.

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Brief explanations of the approach underlying the above-mentioned definitions are annexed hereto.

Brief explanations of the approach underlying the definitions of new types of weapons of mass destruction and new systems of such weapons

1. New types of weapons of mass destruction

The principle of action of any weapon is reflected in the means of producing its effect, and in the target and nature of its effect. A list of the classification criteria characterizing any type of weapon of mass destruction is given below. A type of weapon may be considered as a new type of weapon of mass destruction if it is new in respect of at least one of these three criteria -- i.e., the means, target or nature of its effect.

2. Classification criteria

(a) Means of producing the effect

Physical: the direct action of explosions (blast, thermal, etc.), shock waves, acoustic waves, electro-magnetic waves in the radio range (non-ionizing radiation and equivalent radiations of charged particles), electro-magnetic waves in the optical range (light and infra-red radiations), hard electro-magnetic radiations (ionizing radiations -- X-rays, gamma-rays, etc., and equivalent radiations of elementary particles -- electrons, protons, neutrons, etc.).

Chemical: the direct effect of chemical agents delivered to the target area (traditional type of chemical effect); the effect of chemical agents formed directly in the target area from non-toxic or low-toxic components delivered to the target area; the effect of chemical agents formed directly in the target area from non-toxic media and substances present in the target area.

Biological: the use of micro-organisms (microbes, rickettsia, viruses, etc.), plants (parasitic fungi, weeds, etc.).

(b) Targets

Man: fluid media of the human organism (cytoplasm, blood plasma, lymph, etc.), cells, tissue, organs, regulatory systems, reproductive system, genetic transfer systems, biological defence systems (immunity thresholds for specific biological, chemical, radiological and other effects) and the behaviour (psychic, vestibular and other effects) of the human population as a whole.

Human environment: edaphic elements (soil, water bodies, etc.); biotic elements (crops and livestock constituting principal sources of food, foodstuffs derived from them); climatic elements; geophysical elements -- the lithosphere (crust, upper mantle), the hydrosphere, the troposphere (atmospheric circulation, hydrometeorology, composition, etc.), the stratosphere and upper atmosphere (ozone layer and other elements), terrestrial fields (gravitational, magnetic, electro-magnetic), near space (radiation belts, radiation and particle flux, etc.).

Man-made products: installations and networks vitally important for human existence.

(c) Nature of the effect

Mass annihilation of people and population, their degradation and extinction, large-scale permanent (irreversible) and temporary loss of certain human abilities, destruction and incapacitation of vitally important installations and networks.

3. Examples of new types of weapons of mass destruction

1. Infrasonic weapons emitting acoustic waves designed to injure human internal organs are a new type of weapon in so far as the target they are directed against (human internal organs -- for example, the cardio-vascular system), the means of producing the effect (infrasonic waves) and the nature of the effect (the death of a human being due to sudden cardio-vascular disfunction) are all new.

2. Weapons designed to damage the human reproductive system are a new type of weapon in so far as the target they are directed against (the genital system) and the nature of the effect (extinction as a result of sterilization) are new, though the effect may be produced by traditional methods.

3. Ethnic weapons using various agents for the selective extermination of specific ethnic population groups are a new type of weapon in so far as they produce a new type of effect (selective extermination of individual ethnic groups), though the target and means of producing the effect may be traditional.

4. Examples of new systems of weapons of mass destruction

Any system of weapons is the practical embodiment of a specific means of attack comprising a combination of strike and logistic elements. Such a combination may for example consist of a vector, the strike weapon itself, and means of control, communication, monitoring, etc.

A determining feature of the transition from a traditional system of weapons to a new system of weapons of mass destruction is the newness of its effect as mentioned in paragraph 2 (c). This may be the result of the incorporation in a traditional weapons system of a new technical element in the strike or logistic elements. For example, missile, artillery, aircraft or other traditional weapons systems may assume the character of a new system of weapons of mass destruction if they embody a new technical element such as fuel-air ammunition for producing powerful fuel-air explosions.